



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/988,670	11/20/2001	Kunio Fukai	Q67306	8998

7590 01/29/2004  
SUGHRUE, MION ZINN, MACPEAK & SEAS, PLLC  
2100 Pennsylvania Avenue, N.W.  
Washington, DC 20037-3202

EXAMINER

ESTRADA, ANGEL R

ART UNIT	PAPER NUMBER
----------	--------------

2831

DATE MAILED: 01/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b> 09/988,670	<b>Applicant(s)</b> FUKAI ET AL.	
	<b>Examiner</b> Angel R. Estrada	<b>Art Unit</b> 2831	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 21 October 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 2-11 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 2-5 and 8-11 is/are rejected.
- 7) ☒ Claim(s) 6 and 7 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☒ All    b) ☐ Some \*    c) ☐ None of:  
1. ☒ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).  
\* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.  
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

#### Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)                      4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_\_
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)                      5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_\_                      6) ☐ Other: \_\_\_\_\_

## DETAILED ACTION

### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 2-5 and 8-11 are rejected under 35 U.S.C. 102(e) as being anticipated by the Ohkawai et al (US 6,547,619, hereinafter Ohkawai).

Regarding claim 2, Ohkawai discloses a method of fabricating an arc tube for a discharge lamp (see figure 5) including: forming shroud joining portions (see figure 5) with circular cross sections on front and rear end sides of an arc tube body (5); inserting the arc tube body (5) into a shroud (G); heating predetermined portions of the shroud (G) wherein the predetermined portions are modified in a direction of reducing diameters thereof as an effect of the heating (column 1 lines 30-35); and joining the predetermined portions to the shroud joining portions on the front and rear end sides of the arc tube body (see figure 5 or column 1 lines 30-35).

Regarding claim 3, Ohkawai discloses the method of fabricating an arc tube for a discharge lamp (see figure 5), wherein the joining step is performed by a welding process (column 1 lines 30-35).

Regarding claim 4, Ohkawai discloses the method of fabricating an arc tube for a discharge lamp (see figure 5), wherein the predetermined portions include a front end

side and a rear end side of the shroud (G), and wherein the rear end side of the shroud (G) is welded to the rear end side of the arc tube body (5), and the front end side of the shroud (5) is welded to the front end side of the arc tube body (see figure 5 or column 1 lines 30-35).

Regarding claim 5, Ohkawai discloses the method of fabricating an arc tube for a discharge lamp (see figure 5), wherein the shroud joining portions (see figure 5) include a cylindrical non-pinch seal portion (see figure 5) in an extended manner at backward portion of a first pinch seal portion (7) on the rear end side of the arc tube body (5), and a shrink seal portion (see figure 5) adjacent to a forward portion of a second pinch seal portion (7) on the front end side of the arc tube body (5), and the joining step includes joining a rear end side of the shroud (G) to the cylindrical non-pinch seal portion (see figure 5) on the rear end side of the arc tube body (5), and joining a front end side of the shroud (G) to the shrink seal portion (see figure 5) on the front end side of the arc tube body (5).

Regarding claim 8, Ohkawai discloses the method of fabricating an arc tube for a discharge lamp (see figure 5), further including forming the arc tube body (5) by forming a bulb (5a) at a portion of a tube; inserting a first electrode assembly (6) from one end side of the tube provided with the bulb (5a); pinch-sealing a first portion of the tube (5b) between the one end side and the bulb (5a), and near the bulb (5a); supplying a predetermined filling material to the bulb (p); inserting a second electrode assembly (6) from the other end side of the tube and holding the second electrode assembly (6) at a predetermined position (see figures 6a-6c), supplying an inactive gas (column 2 lines 9-10) within the bulb (5a); pinch-sealing or tipping off a second portion of the tube near

the other end side of the tube to seal the inactive gas within the tube (see figure 5); and pinch-sealing a third portion of the tube, between the other end side and the bulb, and near the bulb (see figure 5).

Regarding claim 9, Ohkawai disclose the method of fabricating an arc tube for a discharge lamp (see figure 5), wherein prior to pinch-sealing of the third portion of the tube between the other end side and the bulb (5a), and near the bulb, a seal expected area near the bulb (5a) is heated and molten to perform shrink sealing to form a shrink seal portion while cooling the bulb with a cooling medium (column 2 lines 1-17), and thereafter, during the pinch-sealing, a bulb side of the shrink seal portion is pinch-sealed with a predetermined width (see figure 5), thereby forming the pinch seal portion in the third portion of the tube adjacent to the shrink seal portion (see figure 5)

Regarding claim 10, Ohkawai disclose the method of fabricating an arc tube for a discharge lamp (see figure 5), wherein a negative pressure (see abstract) is maintained within the shroud (5) while a rear end side of the shroud (G) is joined to the rear end side of the arc tube body by welding (column 1 lines 30-35), a welding expected area on a front end side of the shroud (G) is heated, molten and softened, and a front end side of the shroud (G) is shrink-sealed to the shrink seal portion adjacent to the pinch seal portion (see figure 5).

Regarding claim 11, Ohkawai discloses the method of fabricating an arc tube for a discharge lamp (see figure 5), wherein the shroud joining portions include a cylindrical non-pinch seal portion (see figure 5) in an extended manner at a forward portion of a pinch seal portion (7) on the front end side of the arc tube body (see figure 5), and the joining step includes joining a front end side of the shroud (G) to the cylindrical non-

pinch seal portion (see figure 5) on the front end side of the arc tube body (5), or to a circular cross-sectional portion of the front end side that includes the cylindrical non-pinch seal portion (see figure 5).

***Allowable Subject Matter***

2. Claims 6 and 7 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is an examiner's statement of reasons for allowance: The primary reasons for the indication of the allowability of claims 6 and 7 are:

Regarding claim 6 is the inclusion therein in combination as currently claimed of the limitation of the shroud joining portions including a cylindrical non-pinch seal portion provided with a circular flange portion on an outer periphery thereof in an extended manner at a backward portion of a pinch seal portion on the rear end side of the arc tube body; and the joining step includes joining the rear end side of the shroud to the circular flange portion on the rear end side of the arc tube body.

Regarding claim 7 is the inclusion therein in combination as currently claimed of the limitation of the cylindrical non-pinch seal portion including a circular flange portion on an outer periphery, and the rear end side of the shroud is joined to the circular flange portion on the rear end side of the arc tube body.

These limitations are found in claims 6 and 7, and are neither disclosed nor taught by the prior art of record, alone or in combination.

Art Unit: 2831

***Response to Arguments***

3. Applicant's arguments with respect to claims 2-11 have been considered but are moot in view of the new ground(s) of rejection.

***Conclusion***

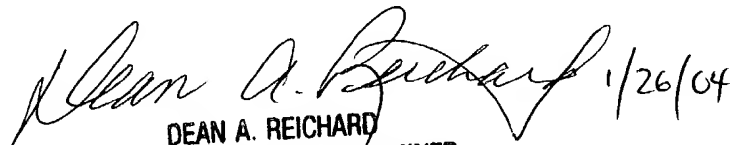
4. Any inquiry concerning this communication should be directed to Angel R. Estrada at telephone number (703) 305-0853. The Examiner can normally be reached on Monday-Friday (8:30 -5:00).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Dean Reichard can be reached on (703) 308-3682. The fax numbers for the organization where this application or proceeding is assigned are (703) 872-9318 for regular communications and (703) 872-9319 for after final communication.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

AE

January 23, 2004

 1/26/04  
DEAN A. REICHARD  
SUPERVISORY PATENT EXAMINER  
TECHNOLOGY CENTER 2800